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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,318	07/31/2001	Kathleen M. Smith	DX01136K	5031

28008 7590 02/27/2003

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EXAMINER	
NICHOLS, CHRISTOPHER J	

ART UNIT	PAPER NUMBER
1647	

DATE MAILED: 02/27/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/920,318	Applicant(s) SMITH ET AL.	
	Examiner Christopher Nichols, Ph.D.	Art Unit 1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) *1-3 and 6* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *4-5 and 7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-7* are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *9,10* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group II (claims 4, 5, 6, and 7) drawn to a method of treating an inflammatory bowel disease wherein the Applicant elects the following species: MIP-3a and its receptor, CCR6, gastrointestinal mucosa, and ulcerative colitis in Paper No. 12 (21 January 2002) is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election **without** traverse (MPEP § 818.03(a)). Claims 1-3 and 6 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected material, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 12 (21 January 2002). The Examiner takes note that claim 3 was inadvertently left out of the restriction requirement Paper No. 8 (12 September 2002). The Applicant is correct on this matter. Claim 3 does belong in Group I and was left out due to a clerical error on the Examiner's part. However, claim 3 still stands as non-elected because the Applicant elected Group II.

Status of Application, Amendments, and/or Claims

2. Claims 1-3 and 6 are withdrawn from consideration and claims 4, 5, and 7 are under examination.

3. The Information Disclosure Statements Paper No. 9 (11 September 2002) and Paper No. 10 (7 January 2003) have been received and entered in full.

Sequence Rules

4. This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth below. This application discloses a nucleic acid sequence with assigned SEQ ID NO's (pp. 19 lines 18-19). Applicant may amend specification to assign submitted SEQ ID NO's to sequence listings (label sequence F as "SEQ ID NO: 1" and sequence R as "SEQ ID NO: 2"). Correction is required.

Specification

5. The disclosure is objected to because of the following informalities: "inco porated" misspelled (pp. 21 line 11). Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 4, 5, and 7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 4, 5, and 7 are directed to treating an inflammatory bowel disease said method comprising blocking signaling mediated by a chemokine or effected by a chemokine receptor via administration of antibody raised against said chemokine or said chemokine receptor.

7. The specification teaches that the expression of the following genes was elevated in patients with inflammatory bowel disease: TARC, CCR4, CCR8, MIP-3α, CCR6, and TNF- α.

8. The art teaches that chemokines and chemokine receptors are involved in inflammatory bowel diseases such as Crohn's disease and ulcerative colitis [MacDermott et al. (February 1998) "The Central Role of Chemokines (Chemotactic Cytokines) in the Immunopathogenesis of Ulcerative Colitis and Crohn's Disease." Inflammatory Bowel Diseases 4(1): 54-67]. The art also teaches that antibodies raised against IL-8 and CCR4 can be used to treat inflammatory bowel diseases (US 5707622; WO 00/42074).

9. The specification indicates that MIP-3α/CCR6 are expressed at higher levels in ulcerative colitis tissue, which indicates that MIP-3α/CCR6 may be diagnostic of ulcerative colitis. However, the claims are directed to therapy. There is no direction/guidance in the specification whether MIP-3α/CCR6 is involved in a rate-limiting step, such that blocking this signaling would result in any effect on the disease. No working examples of therapy are present in the specification. The prior art provides no clear link between MIP-3α/CCR6 and ulcerative colitis.

10. Due to the large quantity of experimentation necessary to identify all the applicable therapeutic antibodies, the lack of direction/guidance presented in the specification regarding synthesizing, screening, and evaluating all applicable therapeutic antibodies, the absence of working examples directed to known therapeutic antibodies, the complex nature of the invention, the unpredictability of the effects of antibodies on multi-symptom diseases [WO 00/42074; MacDermott et al. (February 1998) "The Central Role of Chemokines (Chemotactic Cytokines) in the Immunopathogenesis of Ulcerative Colitis and Crohn's Disease." Inflammatory Bowel Diseases 4(1): 54-67; Cook et al. (May 2000) "CCR6 Mediates Dendritic Cell Localization,

Lymphocyte Homeostasis, and Immune Responses in Mucosal Tissue." Immunity 12: 495-503.], and the breadth of the claims (no recitation of active agent in claims 4 or 5, no recitation of effective doses or administration routes) which fail to recite limitations for what constitutes an applicable agent, undue experimentation would be required of the skilled artisan to make and/or use the claimed invention in its full scope.

11. Thus the claimed invention is directed to a method of treating or preventing inflammatory bowel disease via administration of an antibody raised against a chemokine or chemokine receptor, which is not supported by the teachings of the prior art. One skilled in this art would be expected to reasonably doubt that the claimed method would work due to the following obstacles: Specific biological actions/activities that the antibody would effect; How does the effect on chemokine expression or chemokine receptor availability to symptoms of ulcerative colitis; How does the antibody affect the patients gastrointestinal tract? The specification does not provide guidance on how to overcome expected obstacles. The scope of patent protection sought by Applicant as defined by the claims fails to correlate reasonably with the scope of enabling disclosure provided by the specification and prior art for the following reasons.

12. Finally, the application must establish a nexus between the anti-chemokine/anti-chemokine receptor antibody recited and relief of ulcerative colitis recited in the claims. In this case, the skilled artisan is not guided as to how an antibody must affect one or more activates of the chemokines and/or chemokine receptors such that the antibody would be determined to be one that alleviates or decreases ulcerative colitis. Also, ulcerative colitis are a complicated disorders (specification) and it is not clear that chemokines and/or chemokine receptors are

involved in a rate-limiting step for ulcerative colitis, such that antibodies could be used as therapeutics.

13. Regarding claim 5, "Prevention" is understood in the art to mean a total protection from disease or injury (Stedman's Medical Dictionary). Thus, given the high level of required effect, a high level of evidence showing prevention is also required. The specification does not demonstrate total prevention.

Summary

14. Claims 4-7 are hereby rejected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher J. Nichols whose telephone number is 703-305-3955. The examiner can normally be reached on Monday through Friday, 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Kunz can be reached on 703-308-4623. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications. The fax phone numbers for the customer service center is 703-872-9305

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Elizabeth C. Kemmerer

CJN
February 26, 2003